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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,293	12/12/2003	Hiroyuki Kawakubo	HGM-121-A	9945
21828	7590	05/04/2005	EXAMINER	
CARRIER BLACKMAN AND ASSOCIATES			BENTON, JASON	
24101 NOVI ROAD			ART UNIT	
SUITE 100			PAPER NUMBER	
NOVI, MI 48375			3747	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/735,293	<b>Applicant(s)</b> KAWAKUBO ET AL.	
	<b>Examiner</b> Jason Benton	<b>Art Unit</b> 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-14 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 8, 9 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/21/04.

- 4) ☐ Interview Summary (PTO-513)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

**Henry C. Yuen**  
**Supervisory Patent Examiner**  
**Group 3700**

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Claims 1-7, 10-14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. in view of Kawamoto.

The patent by Ito et al. (6,443,263) shows a multi-cylinder engine with an engine block having a plurality of oil galleries formed therein. An oil tank (20) and balancer (6) are each respectively attached to a front central portion of the multi-cylinder internal combustion engine. The engine further comprises an oil pan (65a, 66a) and an oil pump (65, 66) for drawing oil from an oil reservoir portion of the oil pan and for supplying the oil to individual portions of the internal combustion engine after passing the oil through the oil cooler (70)

The patent by Ito et al. does not show the specific location of the oil cooler, just that it is located at an appropriate position of the vehicle body. The patent by Kawamoto (6,470,847) shows an oil cooler (44) attached to a front central portion of the multi-cylinder internal combustion engine. It is placed in the front central portion to facilitate repairs needed to be done, and to use air flow to further cool the lubricant. In view of Kawamoto it would have been obvious to anyone skilled in the art who wanted to place the oil cooler at a location that is easier to repair, to improve on Ito et al. by placing the oil cooler in a front central location of the engine body.

The patent by Ito et al. does not show an oil filter. The use of oil filters in lubrication circuits is well known in the art. The patent by Kawamoto shows an oil filter (52) attached to

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a side surface of the engine block (Col. 5, lines 8-13), and an oil cooler located in a front central location. In view of Kawamoto it would have been obvious to anyone skilled in the art who wanted to keep the lubricant cleaner to improve on Ito et al. by providing an oil filter on the side surface of the engine block..

It is the view of the examiner that the oil from the oil cooler is inherently introduced to a substantially central part of a main oil gallery formed in the engine block.

The crankshaft (5) has a plurality of crankshaft webs. The balancer comprises a driven gear (57) and an intermediate crankshaft web of the crankshaft is provided with a drive gear (48). The drive gear on the crankshaft is meshed with the driven gear of the balancer (through counter shaft 50) so as to thereby drive the balancer.

The patent by Kawamoto specifically requires the oil filter being detachable from the engine without interference from components of the engine.

The oil cooler improves oil flow throughout the engine so that oil pressure is uniform.

The oil filter of Kawamoto comprises an oil filter case and an oil filter element.

The oil cooler and the balancer are so situated throughout the engine so as to maintain a weight balance from left to right.

The oil cooler of Kawamoto is utilized with a water-cooled version of the engine, and an additional cooling effect is achieved by running airflow over the oil cooler when the engine is moving through space.

The oil filter case of the Kawamoto oil filter, is easily removable for ease of maintenance.

The balancer is disposed near the gear drive assembly.

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*Allowable Subject Matter*

Claims 8, 9, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Benton whose telephone number is (571) 272-4838. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Henry S. Yuen  
Supervisory Patent Examiner  
Group 3700

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